

## #4 Grodziskie

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- Gravity **7.6 BLG**
- ABV ---
- IBU **26**
- SRM **2.7**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **0 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

### Steps

- Temp **62 C**, Time **10 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **50 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Grodziski	2.5 kg (83.3%)	80 %	4
Grain	Weyermann - Smoked Malt	0.5 kg (16.7%)	81 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	8.8 %
Boil	Lublin (Lubelski)	15 g	30 min	4 %
Boil	Lublin (Lubelski)	15 g	10 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	---